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ABSTRACT

The results of a study developing and testing a socially relevant model for assessing organizational effectiveness in developing countries are presented. Focus is on assessing the Dominican Republic. The objectives of the study were: to select and test theoretically sound effectiveness criteria which account for the type of organization and the social context in which it operates; to specify and evaluate the participation of different constituencies within the institutions as sources of data in the assessment process; and to define the type of data to be collected, construct related instruments, and analyze the consistency of data collected. The four major domains of organizational performance are defined as human relations, organizational acquisition, academic goals, and social commitment. Social conditions affecting the survival of institutions (by limiting their resources) are described, along with institutional responses directed toward improving the existing social conditions and eliminating social constraints. Among the conclusions are the following: the society for which a model is developed as well as the type of organization should be part of the components of an assessment model; and the institutional profiles based on the questionnaire data must differentiate between the institutions. The results support the validity of the effectiveness measurement used in this model. An appendix presents criteria of effectiveness. Contains 54 references. (SM)

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ALTERNATIVE MODEL FOR THE ASSESSMENT OF ORGANIZATIONAL EFFECTIVENESS FOR HIGHER EDUCATION INSTITUTIONS IN DEVELOPING COUNTRIES

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and James S. Fairweather

The Pennsylvania State University

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IN DEVELOPING COUNTRIES

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The study developed and tested a socially relevant model for assessing organizational effectiveness. The conceptual framework defined four organizational domains: "Human Relations," "Organizational Acquisition," "Academic Goals" and "Social Commitment." The model defined effectiveness criteria, and determined the participation of constituencies and the type of data to be collected.

The model was tested in three Dominican Republic universities. The major conclusions were: a socially relevant assessment model was developed, some effectiveness criteria lacked independence, criteria among the four domains were interrelated, the model differentiated between the institutions, and the questionnaire-based profiles were consistent with other obtained data.

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This study dealt with assessing organizational effectiveness of higher education institutions in a developing country, the Dominican Republic. Consequently, the study addressed a three-perspective assessment issue: (a) organizational effectiveness, (b) of higher education institutions, (c) in developing countries. Many of the most significant writings in the field of organizational effectiveness have been dedicated to presenting alternative perspectives (Cameron & Whetten, 1983; Ghoparde, 1971; Goodman & Pennings, 1977; Harrison, 1987). The first studies of organizational effectiveness in institutions of higher education linked to the tradition of organizational studies, reflected the peculiarities of institutions of higher education (i.e., Cameron, 1978, 1979; Jenkins & Rossmeier, 1974); Sprick, 1975). These models not only focused on the specific characteristics of the focal organization, but also tended to be organization-specific within a geographic region. More recently, Armenta (1984) developed an assessment model for the community colleges in the state of Arizona. However, this latter feature was not always the case when similar attempts were made in developing nations.

Efforts on assessing organizational effectiveness of institutions of higher education in developing countries include studies which imported the models of assessment (Abdulrahim, 1985; Devadoss, 1980); and others which transferred the theoretical framework (Handel, 1983). Very few paid enough attention to critical national developing issues, consequently very few can be considered relevant to the social context of the focal country. The practice was to use organizational effectiveness models which did not necessarily fit the society and culture in which the models were to be applied; a direct and uncritical transfer of technology was the predominant style (Khandwalla, 1984). What was needed was the development of a model that assessed institutions of higher education in developing countries and which focused on particular aspects derived from the economic, political, and cultural situations of those countries--an assessment model relevant to the social context.

Based on the literature of effectiveness which suggests to define a model of assessment according to a set of critical issues (Cameron & Whetten, 1983; Krakower, 1985), the present study, by focusing on the whole organization in a specific social context, made an early decision about three critical issues: the level of analysis (the whole organization); the referent for judgment (its relative effectiveness compared to similar institutions of the same nation); and the time frame (the present). The major efforts of this study concentrated on the

three remaining issues: the effectiveness criteria, the participation of constituencies, and the type of data to be collected.

The study identified the following objectives:

1. To select and test theoretically sound effectiveness criteria which account for the type of organization and the social context in which it operates (i.e., institutions of higher education in the Dominican Republic).
2. To specify and evaluate the participation of different constituencies within the institutions as sources of information in the assessment process.
3. To define the type of data to be collected, construct related instruments, and analyze the consistency of the data collected.

Conceptual Framework

This study adopted a conceptual framework which reflects the complexity of organizations and the related complex and paradoxical nature of effectiveness (Cameron, 1986; Lewin & Minton, 1986; Quinn & Rohrbaugh, 1981). Either from an epistemologic (Ramos, 1981) or a pragmatic point of view (Bolman & Deal, 1984), the multiple conceptualization of organizations has gained momentum.

The conceptual framework defined four major domains of organizational performance: "Human Relations," "Organizational

Acquisition," "Academic Goals" and "Social Commitment" (see Figure 1). The domains--specific fields of activity--related to different perspectives in the studies of organizations; they were drawn from Quinn and Rohrbaugh's competing value model (1981), from Krakower's model for the assessment of higher education institutions (1985), and from Sander's multidimensional paradigm for administrative theory. The "Social Commitment" domain represented in this study the desired and necessary transformational actions of the institutions on the developing conditions of the country, adding the important component of institutions of higher education as "social change agents" (Khandwalla, 1984) with macro-quality preoccupations (Ulrich & Wieland, 1980; Nord, 1983; Sander, 1984) to more prevalent features.

INSERT FIGURE 1 ABOUT HERE

Based on the conceptual framework, a derived definition of effectiveness for higher education institutions in developing countries was:

> Higher education institutions are effective when they have a positive interaction with society by acquiring needed organizational resources and by giving a qualified academic product, along with valued and transformational contributions. This is accomplished through favorable conditions in the social relations among the people involved in the organizational tasks.

	EXTERNAL ATTENTION	INTERNAL ATTENTION
SOCIETY-CENTERED	**Social Commitment** (valued and transformational product)	**Academic Goals** (quality of academic product)
ORGANIZATION-CENTERED	**Organizational Acquisition** (valuable and critical resources)	**Human Relations** (quality of social interactions)

Figure 1. Multidomain and Paradoxical Perspective of Organizational Effectiveness for Dominican Republic Institutions of Higher Education

In sum, to be effective institutions of higher education should act simultaneously as "human ecology" settings, "living systems," "purposive collectivities," and "social change agents;" all metaphors used by Khandwalla (1984) to identify different performances of organizations in developing countries.

The existence of multiple domains was also supported by the review of higher education assessment models from the American self-studies tradition (Dressel, 1972; Educational Testing Service, 1978; Kells, 1980; Miller, 1979); and the Latin American institutional assessment tradition (Aguilar & Block, 1977; Droguett, 1970; Escotet, 1984; Estaba, 1984; Ramirez-Pazmiño; Solana, 1970; Villalobos, 1984).

The study also reviewed a group of higher education effectiveness assessment models which were more closely connected to the field of organizational effectiveness and the organizational literature. Some of them used an inductive methodology: identifying several common criteria of institutions of higher education; and then, determining underlying domains Abdulrahim (1985), Cameron (1978, 1979, 1981), Kleeman and Richardson (1985) and Rigdon (1983). Others used a deductive methodology: drawing effectiveness criteria from specific organizational approaches and related domains (Armenta, 1984; Cope, 1981; Devadoss, 1980; Handel, 1983; Jenkins & Rossmeier, 1974; Krakower, 1985; Sprick, 1975).

From such a convergent analysis of the different types of models, the study drew relevant criteria and germane

characteristics for developing a model consistent with the four adopted domains (theoretically linked) as they referred to institutions of higher education (organization-specific). Overall, the review models had some similarities: they approached higher education institutions' performance as a complex phenomenon, and they were concerned with the organizational peculiarities of colleges and universities.

After reviewing the higher education institutional assessment literature, the study shifted its attention to an examination of the relationship between the focal country and its institutions of higher education. This examination followed the reciprocal-deterministic type of relationship adopted as part of the conceptual framework of the study: the environment affects the institutions, and the institutions affect the environment (Perrow, 1972; Silverman, 1972)

The study examined both the social conditions which impact the survival of institutions by limiting their necessary resources, and the institutional responses directed toward improving the existing social conditions and eliminating social constraints. These latter responses were interpreted not as a matter of survival, but as a matter of social commitment and understanding of the institution's co-responsibility. As for the social conditions, "the Dominican Republic is confronting the worst economic crisis in its recent history" (World Bank, 1985 p. iv). Also, there are some institutional responses to be considered. A developing country in a period of economic crisis

should expect a significant contribution from institutions of higher learning. These institutions could play a crucial role as expediting agents for improving social conditions (Mosha, 1986; Ribeiro, 1968).

In sum, in a situation of increased constraint, universities should demonstrate their effectiveness by financially surviving and by promoting a positive and transformational social activity. These should be effectiveness criteria for assessing institutions of higher education.

Participation of the Panel of Experts and Initial Definition of the Model

The conceptual framework and the review of the literature guided the researcher in establishing a preliminary version of a model of assessment. The judgments of a panel of experts from the Dominican Republic aided in developing a socially relevant model of assessment.

The sequence of procedures by which the model was adopted was as follows. First a list of criteria, related indicators, type of data, and participation of constituencies was created from the literature reviewed. Second, the list of criteria and related characteristics was sent to the three members of the Dominican panel of experts. They were introduced to the conceptual framework of the study and then asked to judge the salience of the effectiveness criteria and the feasibility and appropriateness of the related characteristics of the assessment

model. Their opinion was crucial to assure the socio-cultural salience of the criteria of effectiveness and to refine the related indicators. Also, the panel contributed to analyzing the feasibility of the adopted data collection procedures and the designed participation of constituencies. The description of the model adopted by this study focuses on three major issues: effectiveness criteria, type of data to be collected, and participation of constituencies.

Criteria and Indicators.

A total of 25 criteria of effectiveness comprised the assessment model of this study. Nine were confirmed for the "Human Relations" domain, six for the "Organizational Acquisition" domain, six for the "Academic Goals" domain, and four for the "Social Commitment" domain. The Appendix lists the 25 criteria.

Type of Data

This study adopted the position that the nature of the indicator and the research situation determined the type of data, and that to triangulate using different types of data was appropriate and reflected the assessment tradition (Cook & Campbell, 1979). Some traditional assessment models advocated the dual nature of the data (Aguilar & Block, 1977; Dressel & Cammack, 1972; Miller, 1979; Villalobos, 1984), and in the new effectiveness models Cameron (1978) used both types of data.

It seemed that interviews and questionnaires of either subjective opinion or objective information were the most appropriate means of collecting data. For this study, a group a indicators represented questions for an interview or items for a questionnaire. The study made a distinction between the core assessment based on the responses to the questionnaire which contained subjective indicators, and the triangulating assessment based on the other types of data.

Participation of Constituencies

This study determined the participation of internal constituencies based on the common practices found in the review of the literature (i.e., Dressel & Cammack, 1972; Miller,1979), on the ideas of participatory assessment or research espoused by Ackoff (1981) and De Schutter (1983), and on practical considerations. The review of the literature showed that administrators were the most commonly consulted constituency in the assessment process; it also showed the eventual participation of other internal constituencies (faculty and students). Administrators and faculty seemed to be the only two groups of internal constituencies who were able to provide solid opinions on each and every criterion and subjective indicator. As a result, the participation of constituencies in the core assessment was limited to administrators and faculty. Furthermore, participation was limited to those administrators

and faculty members who had been more closely linked to the institutions since they presumably had more institutional knowledge.

Students were viewed as having partial knowledge of the effectiveness issues. They were chosen to participate in the assessment model, as triangulating participants. The model of assessment adopted by this study also included the participation of a select group of strategic constituencies. This group had to represent the government, funding agencies, and business-and-industry sector. They would provide an external and triangulating point of view.

Testing the Model

Once the model was developed the authors tested it in three higher educations institutions of the Dominican Republic. The testing of the model was guided by several research questions. In testing the model the objectives were: to test sound criteria of effectiveness, to evaluate the participation of constituencies as sources of information, and to analyze the consistency of the data collected. The study relied on questionnaire data of the core assessment to build the institutional profiles; similar method was utilized by Abdulrahim (1985), Cameron (1978, 1979, 1981), and Rigdon (1983).

The research questions were:

1. What are the interrelationships of criteria within each domain on the measurement of performance?

2. What are the interrelationships between the different domains?
3. Do the institutional profiles differentiate among the institutions studied?
4. Are there differences in the performance rating between administrators and faculty at each institution?
5. Are other data sources consistent with the combined performance ratings of administrators and faculty on institutional effectiveness?

This study derived several criteria of effectiveness for each domain; consequently, it assumed that each domain was factorially complex (Kerlinger, 1986) and that each criterion represented a different factor within each domain. The first research question focused on those intra-domain relationships; its answer was an important step in the development of the final model.

Institutional Sample

The model was tested in three private institutions of higher education of the Dominican Republic. This represented approximately 12% of the total number of institutions of higher education of that nation. The selection of the institutions followed a "purposeful sample technique" (Patton, 1980). Three distinct institutions based on reputation, resources, andtradition. In order to guarantee confidentiality, this study refers to these institutions as "A," "B," and "C."

Respondent Sample

In each institution, limited samples of administrators and faculty were selected to complete the questionnaire. According to the characteristics of the adopted model, the major criterion for choosing respondents was to select those who might be better informed about the issues involved; consequently a purposeful sampling procedure was used (Patton, 1980). With the assistance of a top administrator at each institution the author selected a group of administrators representing 50% of the total and a group of faculty representing 15% of the total (see Table 1).

Table 1
Respondent Sample

Type of constituency	Percentage of population in the sample	Responses							
		Institution							
		Total		"A"		"B"		"C"	
		N	%	N	%	N	%	N	%
QUESTIONNAIRES:									
Administrators	50%	39	95%	9	100%	16	89%	14	100%
Faculty	15%	53	70%	11	58%	28	88%	14	56%
Students	3%	152	100%	54	100%	61	100%	37	100%
INTERVIEWS:									
Administrators		21		5		9		7	
Faculty		9		4		4		5	

A subsample of this group was also selected to be interviewed. Those chosen were all top administrators (rectors, vice-rectors, deans or the equivalent); and faculty members interviewed either filled some type of leadership position or were characterized by their informal leadership.

For the triangulating data, students were also selected on a purposeful sampling basis. The study used upper-class students from three different academic units at each institution who represented approximately 3% of the student population. The top administrator who helped select faculty and administrators also helped in this process. Responses rates for the questionnaire were 95% for administrators and 70% for faculty. As expected for captive groups, the response rate for students was 100% (see Table 1).

Strategic constituencies who were interviewed were chosen in order to collect different opinions from different social sectors. The selected group was composed as follows: one top government official, one businessman, one officer from an international organization which funds higher education projects, one executive of a social-service organization, and three human resource officers from three different private companies. None of the individuals interviewed was either a graduate or a faculty member at any of the three institutions.

Instruments

Two major instruments were devised for this study. The first was a 93-item questionnaire which was constructed based on the subjective indicators for the 25 adopted criteria of effectiveness presented in the Appendix. Each item has seven choices on a Likert-type scale (from "Very strongly disagree" to "Very strongly agree"). This 93-item questionnaire constituted the core assessment instrument. A subset of this questionnaire (38 items) was administered to participating students.

The second major instrument, the "Institutional Questionnaire" was a 98-item questionnaire that was used to collect the information related to the objective indicators. In addition to these two major instruments, two interview guidelines were devised.

Data Collection Process

The first visit to each institution was targeted to determine the administrator and faculty sampling for both the questionnaires and the interviews, and to identify the academic units from which the students should be selected. After determining the sample of administrators and faculty, the researcher distributed the questionnaires, which were accompanied by an institutional cover letter introducing the study. The questionnaires to the administrators were personally distributed and collected by the researcher; the questionnaires to the faculty were distributed and collected through the

clerical staff at the appropriate academic unit. The administration of the questionnaire to the students was coordinated with the academic units and the professor of the selected class group. The researcher visited these classes and waited for the students to complete the questionnaire; he conducted all interviews with both internal and strategic constituencies following a previously established schedule.

Results

Due to the characteristics of the statistical packages used to analyze the data, the results of the combined questionnaire were based on 85 cases (out of 92) which did not include any missing data. The usable questionnaires represented 93% of the questionnaires distributed among administrators and 62% of the questionnaires distributed among faculty. The usable questionnaires for the student sample, 146 cases (out of 152), represented 96% of the administered questionnaires.

Questionnaire Analysis

The first goal of the data analysis was to attain a common and satisfactory metric for administrator and faculty response in the core-assessment questionnaire, in order to make them comparable and to combine them into a single data set. Several decisions were made based on the results of the parallel reliability analyses. These decisions were:

1. Ten items which had a corrected-total item correlation lower than 0.30 with their original criterion, and were not conceptually related to any other criterion, were excluded from the analysis.
2. Two two-item criteria from the "Organizational Acquisition" domain were split into four separate items. After analyzing the content of the items and the conceptual basis of the criteria, two of the items (one from each original split criterion) were integrated with one of the remaining criteria of the same domain.
3. One of the items of a criterion within the Social Commitment domain which had a corrected item-total correlation lower than 0.30 with its original criterion was integrated with another criterion of the same domain to which it seemed to be more conceptually related.

After these changes were made, the two data sets (administrators and faculty) were combined. The result of the reliability analysis for the criteria of the now-combined questionnaire (82 items) exhibited Cronbach's Alpha indexes equal to or greater than 0.56, and all items exhibited a corrected item-total correlation equal to or greater than 0.29. This step guaranteed that the responses of administrators and faculty exhibited the same metric conditions; consequently it could be assumed that they were measuring the same set of variables.

Based on this analysis, the criteria were formed by giving each item the unit weight and averaging the summation of the corresponding items.

From the 38 initial items of the student questionnaire, 33 items, which remained in the combined--administrators and faculty--data set after the above described analysis, were considered for the reliability analysis. It was determined that neither of two criteria ("Human Relations among Students" and "Students as Agents of Social Change") met the requisites for considering the corresponding student responses as exhibiting the same metric conditions as administrators and faculty responses. Consequently, these two criteria were not included for comparison between students and the combination of administrators and faculty. The rest of the examined criteria had Cronbach's Alphas which ranged from 0.64 to 0.81; and the lowest corrected item total correlation was 0.34. The criteria were also formed by giving each item the unit weight and finding the average of the items. The resultant criteria for the combined data set of administrators and faculty from the preceding analysis were used as the input for the next step.

Relationships between Criteria within Domains

To establish the relationship between the criteria within each domain, this study tested the factorial complexity of the domain by running an orthoblique principal components analysis

for all criteria within each domain. By reducing one component at a time, the goal was to find the best solution that met the following requisites: interpretable and conceptually consistent (meaningful), without any inter-principal component correlation greater than 0.70 (non-redundant), and without any criteria loading higher than 0.40 in more than one component (non-ambiguous). The researcher decided to refer to the components of the solution as final criteria; this would facilitate the understanding of the connection between the original criteria (which were entered into the analysis) and the resultant final criteria (principal components of the best solution). The results for the four domains follow.

"Human Relations". In order to test the factorial complexity of the domain, the nine original criteria "Human Relations among Administrators," "Human Relations between Administrators and Faculty," "Human Relations between Administrators and Students," "Human Relations among Faculty," "Human Relations between Faculty and Staff," "Human Relations between Faculty and Students," "Human Relations between Staff and Students," "Human Relations among Students," and "Institutional Climate" entered into the principal component analysis procedure. The only solution that met all the requisites was the single-component solution. In other words, the data supported the existence of a pure factorial condition (Kerlinger, 1986) in the "Human Relations" domain instead of the previously assumed internal complexity.

"Organizational Acquisition". The six original criteria were entered into the principal component analysis. These six criteria were: "Financial Stability," "Flexibility to Respond," "Advantageous Agreements," "Attraction of Good Faculty," "Attraction of Good Students," and "Attraction of Good Administrators and Staff." The best solution contained three final criteria. The first final criterion was "Advantageous Agreements" by itself; the second final criterion, which was called "Institutional Aggressiveness," collapsed the "Flexibility to Respond" criterion, and the three attraction-related criteria (". . . of Faculty," ". . . of Students," and ". . . of Administrators and Staff"). They were combined into one single final criterion. This final criterion seemed to encompass those criteria that measured a more directly successful interaction with the environment. The third final criterion referred to the "Financial Stability" criterion by itself. "Advantageous Agreements" seemed to refer to a very specific bilateral eventual relationship with the external environment; "Institutional Aggressiveness" to the way the institution dealt with the external environment overall; and "Financial Stability" as the product of either an aggressive interaction or conservative administration. Table 2 presents the rotated factor pattern for the three components of the final solution.

Table 2
Rotated Factor Pattern for the
"Organizational Acquisition" Domain Final Solution

Criteria	Factor Loading		
	Advantageous Agreements Factor1	Institutional Aggressiveness Factor2	Financial Stability Factor3
Financial Stability	-0.008	-0.024	1.003
Flexibility to Respond	0.233	0.746	-0.079
Advantageous Agreements	0.993	-0.033	-0.008
Attraction of Faculty	0.001	0.777	0.104
Attraction of Students	0.063	0.669	0.182
Attraction of Administrators and Staff	-0.193	0.993	-0.114

"Academic Goals". For this domain, six original criteria entered the principal component analysis: "Quality of Curriculum and Teaching," "Quality of Graduates," "Quality of Research," "Quality of Continuing Education," "Quality of Social Services" and "Quality of Cultural Activities." None of the different solutions that were examined met the previously stated requisites, except for the six-component solution. This meant that the "Academic Goals" domain kept its original six criteria as the final criteria and was identified as an internally complex domain.

"Social Commitment". This domain represented part of the dimension that had been missing in other attempts to assess the effectiveness of institutions of higher education in developing countries. It was originally composed of four criteria:

"Correspondence with National Issues," "Critical Conscience of Society," "Contribution to Others," and "Students as Agents of Social Change." These four criteria were entered into the principal component analysis in order to examine the internal relationships and test the assumed complexity. After analyzing several solutions, the two-component solution seemed to best fit the desired characteristics. Table 3 presents the rotated factor pattern for the final solution. The two final criteria derived from this solution were "Altruistic Climate" and "National Concern."

Table 3
Rotated Factor Pattern for the
"Social Commitment" Domain Final Solution

Criteria	Factor Loading	
	Altruistic Climate Factor1	National Concern Factor2
Correspondence with National Issues	0.042	0.891
Critical Conscience of Society	-0.089	0.985
Contribution to Others	0.770	-0.090
Students as Agents of Social Change	0.708	0.241

The first final criterion encompassed the previous original criteria "Contribution to Others" and "Students as Agents of Social Change." It was called "Altruistic Climate" in order to include both how much the institution contributed to others, and how much the institution emphasized the students' contribution to others. The second final criterion encompassed the original

criteria "Correspondence with National Issues" and "Critical Conscience of Society." This final criterion was related to how much the institution was contributing to the identification, signal, and solution of national problems while making others aware of these problems. This final criterion was named "National Concern."

From this point, the study used the principal-component scores calculated for the final criteria of each domain.

Relationships between the Different Domains.

Once the final criteria for the domains were identified, it was possible to establish the relationships between the different final criteria from one domain with the final criteria from the other domains. By doing this type of comparison, the study preserved both the identity of each conceptually defined domain and the identity of each empirically identified final criterion. This served to answer Research Question 2 on the relationships between different domains. Table 4 presents the correlation matrix for all the criteria from the four domains.

INSERT TABLE 4 ABOUT HERE

Table 4
Correlation Matrix for the Final Criteria

	HUMREL	ORGAC1	ORGAC2	ORGAC3	ACADE1	ACADE2	ACADE3	ACADE4	ACADE5	ACADE6	SOCCM1	SOCCM2
HUMREL	1.00											
ORGAC1	0.39	1.00										
ORGAC2	0.76	0.32	1.00									
ORGAC3	0.50	0.18	0.51	1.00								
ACADE1	0.77	0.30	0.66	0.33	1.00							
ACADE2	0.37	0.05	0.35	-0.03	0.62	1.00						
ACADE3	0.40	0.12	0.41	0.12	0.51	0.50	1.00					
ACADE4	0.62	0.36	0.53	0.31	0.67	0.41	0.33	1.00				
ACADE5	0.60	0.24	0.64	0.52	0.52	0.19	0.22	0.51	1.00			
ACADE6	0.55	0.33	0.50	0.38	0.36	0.07	0.22	0.39	0.44	1.00		
SOCCM1	0.68	0.30	0.74	0.41	0.69	0.56	0.54	0.45	0.59	0.45	1.00	
SOCCM2	0.63	0.40	0.58	0.19	0.67	0.45	0.61	0.55	0.40	0.42	0.65	1.00

HUMREL: Human Relations
ORGAC1: Advantageous Agreements
ORGAC2: Institutional Aggressiveness
ORGAC3: Financial Stability
ACADE1: Quality of Curriculum and Teaching
ACADE2: Quality of Graduates
ACADE3: Quality of Research
ACADE4: Quality of Continuing Education
ACADE5: Quality of Social Services
ACADE6: Quality of Cultural Activities
SOCCM1: Altruistic Climate
SOCCM2: National Concern

As shown in Table 4, "Human Relations" was a final criterion (and domain) with high or moderate significant correlations with the rest of the criteria across the other three domains. The highest (0.77) was with "Quality of Curriculum and Teaching" (from the "Academic Goals" domain) and the lowest (0.37) was with "Quality of Graduates" (from the "Academic Goals" domain). Another two criteria with high or moderate correlations were "Quality of Curriculum and Teaching" and "Institutional Aggressiveness;" this was consistent with their strong correlations with "Human Relations."

A group of criteria was identified as having significant correlations greater than 0.50 in their reciprocal relationships. They were "Human Relations," one criterion from the "Organizational Acquisition" domain ("Institutional Aggressiveness"), three criteria from the "Academic Goals" domain ("Quality of Social Services," "Quality of Curriculum and Teaching" and "Quality of Continuing Education") and the two criteria from the "Social Commitment" domain ("Altruistic Climate" and "National Concern"). This supported previous findings of this study about the differential performance both in the "Academic Goals" and the "Organizational Acquisition" domains. It also highlighted the pivotal nature of the "Human Relations" domain. In addition, it supported the paradoxical nature of the effectiveness performance of institutions of higher education since it was possible to identify five criteria from different domains which were highly correlated.

Institutional Profiles

By obtaining the means of each final criteria for each institution from the combined administrator and faculty data set, the institutional profiles for the effectiveness performance were identified. The study identified separate institutional profiles for administrators and for faculty. These profiles addressed Research Questions 3 and 4, which referred to the differences institutional profiles, and to the differences between institutional profiles as viewed by each institution's administrators and faculty. The institutional profiles were used to determine the capacity of the core assessment in differentiating the three institutions; the profiles also served to compare between administrator and faculty ratings, and to have a core measure of institutional performance to be used in the triangulation process with other types of data.

This study considered all criteria rated above "0" to show effective performance. All criteria rated below "0" were considered as exhibiting ineffective performance. This consideration followed similar decisions by Abdulrahim (1985) and Cameron (1978).

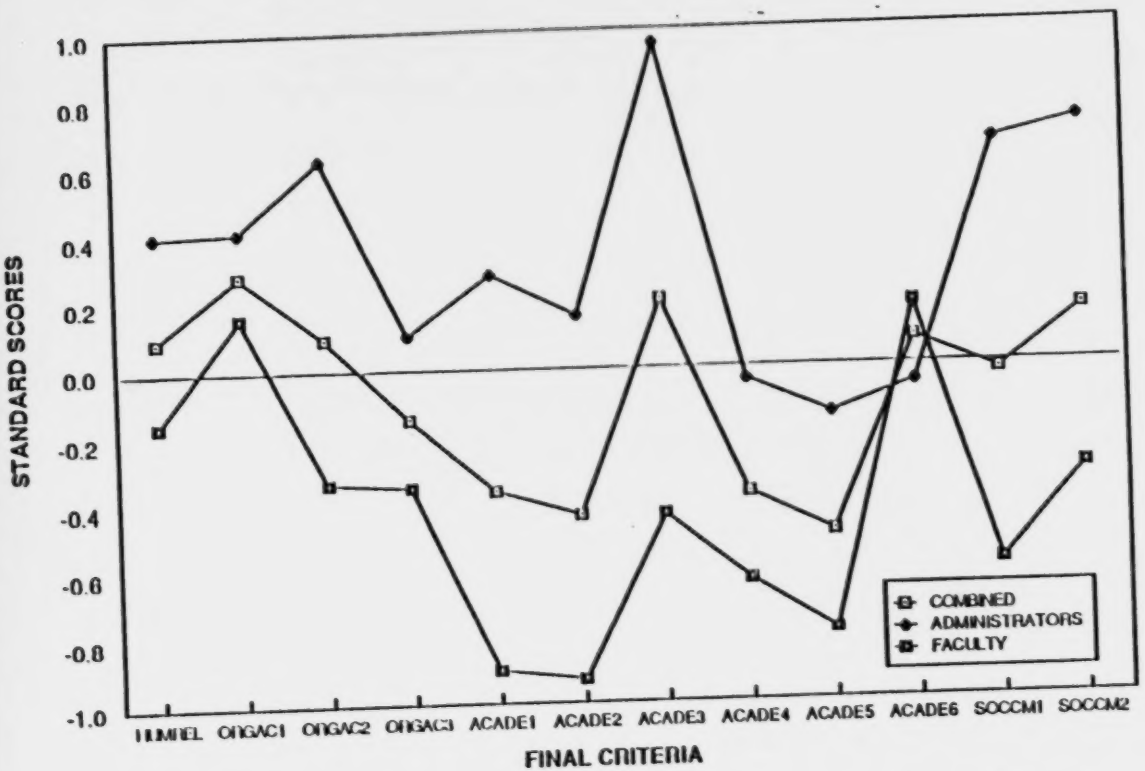
Institution "A". Figure 2 displays the combined profile for administrators and faculty and the separate profiles for each type of constituency. The combined profile depicted Institution "A" as ineffective on half of the final criteria ("Financial Stability," "Quality of Curriculum and Teaching," "Quality of Graduates," "Quality of Social Services," "Quality of Continuing

Education," and "Altruistic Climate"). The "Academic Domain" seemed to be its more ineffective domain, except for the "Quality of Research" and some borderline effectiveness reported for "Quality of Cultural Activities." While this was the combined picture, the profile based on administrators' responses depicted an institution with more effective performances; it did include "Financial Stability," "Quality of Curriculum and Teaching," and "Altruistic Climate" as effective criteria. Conversely, the faculty-based profile depicted the institution as effective in only two final criteria: "Human Relations" and "Quality of Cultural Activities." The low rating in the "Academic Domain" was consistent except for "Quality of Research."

INSERT FIGURE 2 ABOUT HERE

When the ratings provided by administrators and faculty were compared by performing Multivariate and Univariate Analyses of Variance procedures, the overall difference was significant at the 0.07 level, $F(12, 7) = 3.05$; however, the study did find significant differences at the 0.05 level on five of the final criteria. Table 5 presents the results from the Multivariate and Univariate Analyses of Variance.

INSERT TABLE 5 ABOUT HERE



HUMREL	HUMAN RELATIONS	ACADE3	QUALITY OF RESEARCH
ORGAC1	ADVANTAGEOUS AGREEMENTS	ACADE4	QUALITY OF CONTINUING EDUCATION
ORGAC2	INSTITUTIONAL AGGRESSIVENESS	ACADE5	QUALITY OF SOCIAL SERVICES
ORGAC3	FINANCIAL STABILITY	ACADE6	QUALITY OF CULTURAL ACTIVITIES
ACADE1	QUALITY OF CURRICULUM AND TEACHING	SOCCM1	ALTRUISTIC CLIMATE
ACADE2	QUALITY OF GRADUATES	SOCCM2	NATIONAL CONCERN

Figure 2. Institutional Profiles for Institution "A"

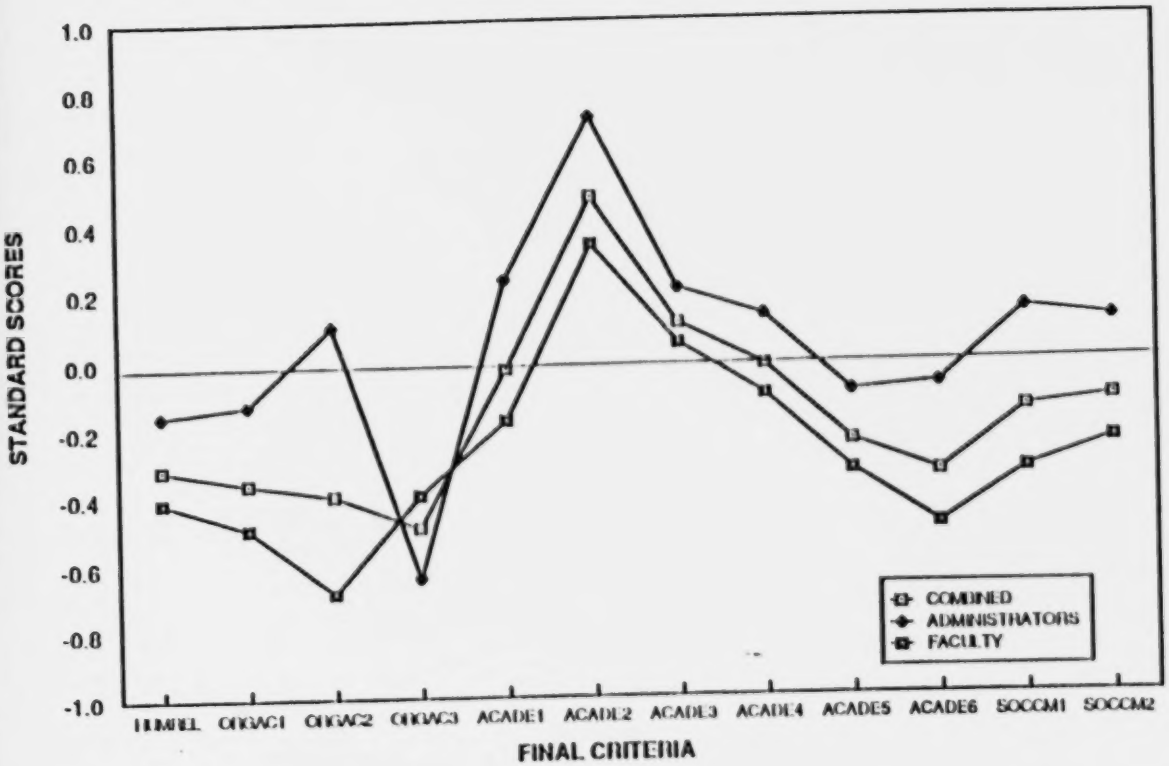
Table 5
Multivariate and Univariate Analyses of Variance
for Final Criteria for Institution "A".
Comparison between Administrators and Faculty

Constituency Effect on	F Statistics	Prob > F
MULTIVARIATE ANALYSIS DF= (12, 7)		
Overall Effect	3.05	0.074
UNIVARIATE ANALYSES DF= (1, 18)		
Human Relations	1.52	0.234
Organization Acquisition		
Advantageous Agreements	0.47	0.503
Institutional Aggressiveness	4.41	0.050
Financial Stability	1.17	0.293
Academic Goals		
Quality of Curriculum and Teaching	5.05	0.038
Quality of Graduates	4.30	0.053
Quality of Research	23.88	0.0001
Quality of Continuing Education	1.81	0.195
Quality of Social Services	1.77	0.200
Quality of Cultural Activities	0.37	0.549
Social Commitment		
Altruistic Climate	7.53	0.013
National Concern	3.93	0.063

While "Quality of Research" exhibited the most significant difference for administrators and faculty ($p < 0.0001$), "Quality of Curriculum and Teaching" and "Altruistic Climate" were two criteria which showed significant differences for the two groups ($p < 0.05$); and for which administrators deemed the institution effective and faculty did not. When the profiles from administrators and faculty were submitted to the parallelism test, the $F(11, 8)$ was 1.49, $p > 0.10$; a significant level large enough to conclude that the two profiles were parallel (Morrison, 1976). After the parallelism of the two profiles was accepted, they were tested for level of profile difference. With an $F(1, 18) = 5.12$, $p < 0.05$, the study revealed evidence of the dissimilarities between administrator and faculty profile levels.

Institution "B". The combined profile for this institution depicted an institution with two criteria exhibiting effective performances (see Figure 3). Two were from the "Academic Goals" domain: "Quality of Graduates" and "Quality of Research." It characterized the institution as having lower effective performances regarding "Human Relations," "Advantageous Agreements," "Institutional Aggressiveness," "Financial Stability," and "Quality of Cultural Activities." The three final criteria of the "Organization Acquisition" domain were reported with the lowest performances.

INSERT FIGURE 3 ABOUT HERE



HUMREL	HUMAN RELATIONS	ACADE3	QUALITY OF RESEARCH
ORGAC1	ADVANTAGEOUS AGREEMENTS	ACADE4	QUALITY OF CONTINUING EDUCATION
ORGAC2	INSTITUTIONAL AGGRESSIVENESS	ACADE5	QUALITY OF SOCIAL SERVICES
ORGAC3	FINANCIAL STABILITY	ACADE6	QUALITY OF CULTURAL ACTIVITIES
ACADE1	QUALITY OF CURRICULUM AND TEACHING	SOCCM1	ALTRUISTIC CLIMATE
ACADE2	QUALITY OF GRADUATES	SOCCM2	NATIONAL CONCERN

Figure 3. Institutional Profiles for Institution "B"

Faculty concurred with administrators in indicating "Quality of Graduates" as the criterion with the best performance; but faculty rated the institutional performance lower across all criteria except for "Financial Stability." Table 6 presents the results from the Multivariate and Univariate Analyses of Variance for Institution "B" that were performed to establish the degree of difference between the two sets of responses. The first finding was that despite the fact that the faculty seemed to rate the institution lower than the administrators, there were not significant overall differences between the two sets of responses. The $F(12, 28)$ from the Multivariate Analysis was 1.36, $p > 0.10$; therefore, the study did not reveal either significant differences between administrators' and faculty's responses for Institution "B," or a borderline result. The separate Univariate Analyses of Variance identified "Institutional Aggressiveness" as the only criterion for which the responses from administrators and faculty were significantly different ($p < 0.01$).

INSERT TABLE 6 ABOUT HERE

The test to establish whether the two sets of responses were parallel or not showed an $F(11, 29) = 1.44$, $p > 0.10$. Consequently, it was appropriate to state that the two profiles for Institution "B" were parallel, and to test the similarity of

Table 6
Multivariate and Univariate Analyses of Variance
for Final Criteria for Institution "B"
Comparison between Administrators and Faculty

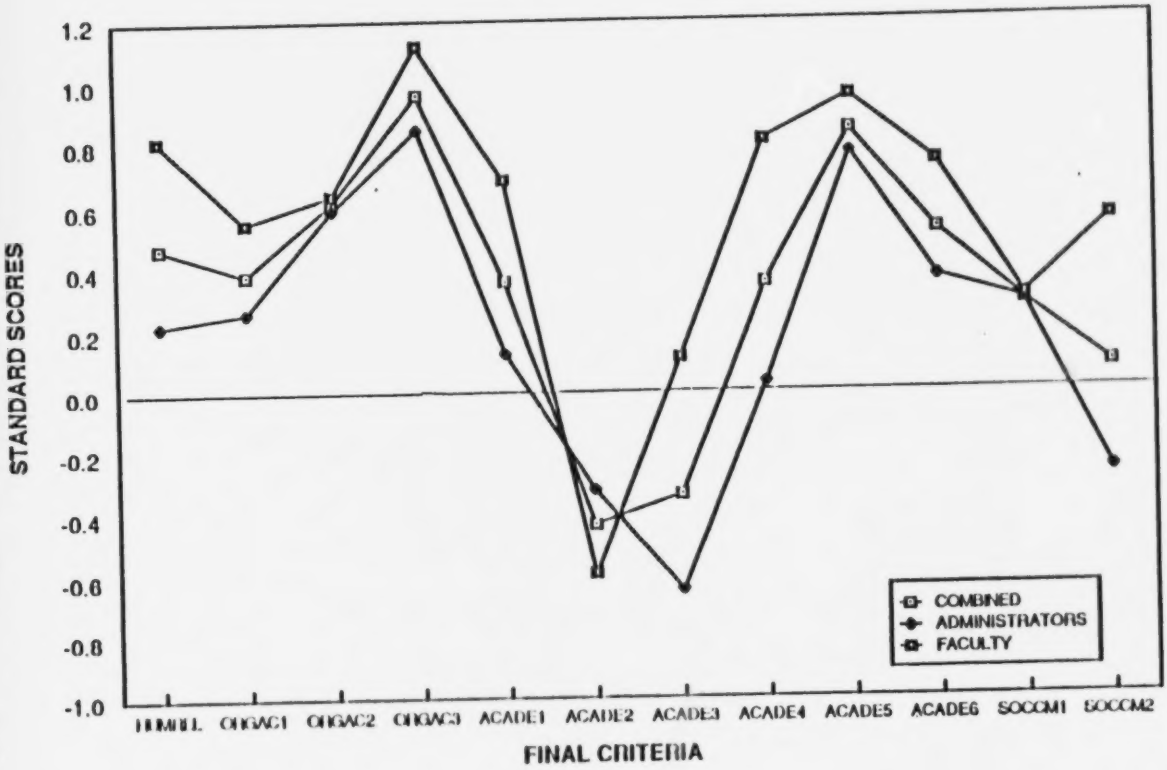
Constituency Effect on	F Statistics	Prob > F
	MULTIVARIATE ANALYSIS DF= (12, 28)	
Overall Effect	1.36	0.241
	UNIVARIATE ANALYSES DF= (1, 39)	
Human Relations	0.71	0.404
Organization Acquisition		
Advantageous Agreements	1.36	0.250
Institutional Aggressiveness	8.46	0.006
Financial Stability	0.84	0.366
Academic Goals		
Quality of Curriculum and Teaching	1.93	0.173
Quality of Graduates	2.65	0.111
Quality of Research	0.26	0.615
Quality of Continuing Education	0.53	0.469
Quality of Social Services	0.82	0.371
Quality of Cultural Activities	1.63	0.209
Social Commitment		
Altruistic Climate	2.17	0.149
National Concern	1.60	0.213

levels. The $F(1, 39)$ for the test of the similarity of levels was 2.36, $p > 0.10$; this was additional evidence of the similarity of the two profiles.

Institution "C". The institutional profile for this institution seemed to depict overall effectiveness as shown in Figure 4. The best rated criteria were "Human Relations," "Institutional Aggressiveness" and "Financial Stability" from the "Organizational Acquisition" domain, and "Quality of Curriculum and Teaching" and "Quality of Social Services" from the "Academic Goals" domain. The two lowest rated criteria were "Quality of Graduates" and "Quality of Research," both from the "Academic Goals" domain. The domain with the lowest rating was "Social Commitment."

INSERT FIGURE 4 ABOUT HERE

The two separate profiles for administrators or faculty appeared to be similar and very close to the combined profile, except for "Quality of Cultural Activities," "Quality of Continuing Education," "Quality of Research" and "National Concern." In contrast to the two previous institutions, this institution's faculty rated the final criteria consistently higher than administrators. The exception was "Quality of Graduates" for which faculty gave a lower rating.



HUMREL	HUMAN RELATIONS	ACADE3	QUALITY OF RESEARCH
ORGAC1	ADVANTAGEOUS AGREEMENTS	ACADE4	QUALITY OF CONTINUING EDUCATION
ORGAC2	INSTITUTIONAL AGGRESSIVENESS	ACADE5	QUALITY OF SOCIAL SERVICES
ORGAC3	FINANCIAL STABILITY	ACADE6	QUALITY OF CULTURAL ACTIVITIES
ACADE1	QUALITY OF CURRICULUM AND TEACHING	SOCCM1	ALTRUISTIC CLIMATE
ACADE2	QUALITY OF GRADUATES	SOCCM2	NATIONAL CONCERN

Figure 4. Institutional Profiles for Institution "C"

Table 7 presents the results of the Multivariate and Univariate Analyses of Variance performed to test the differences between administrators and faculty for Institution C.

INSERT TABLE 7 ABOUT HERE

The Multivariate Analysis of Variance with an $F(12, 11) = 0.90$, $p > 0.10$, supported the overall similarity of the two sets of responses. The separate Univariate Analyses identified two criteria for which there were significant differences between faculty and administrators ($p < 0.05$). These criteria were "Quality of Continuing Education" and "National Concern." A third criterion, "Quality of Curriculum and Teaching," also showed a marked difference between the two groups ($p < 0.10$). In these three criteria, faculty had a higher rating than administrators. In the test of parallelism, the two profiles were determined to be parallel with an $F(11, 12) = 0.740$, $p > 0.10$. The levels of the two profiles were determined to be similar with an $F(1, 22) = 2.63$, $p > 0.10$.

Institutional Comparisons. After determining the individual institutional profiles and analyzing them, the study compared the three institutional profiles using the combined administrator and faculty profiles for each institution. They were all considered to be the result of parallel profiles from two groups of constituencies, although not necessarily the result of similar profiles, as was the case with Institution "A."

Table 7
Multivariate and Univariate Analyses of Variance
for Final Criteria for Institution "C"
Comparison between Administrators and Faculty

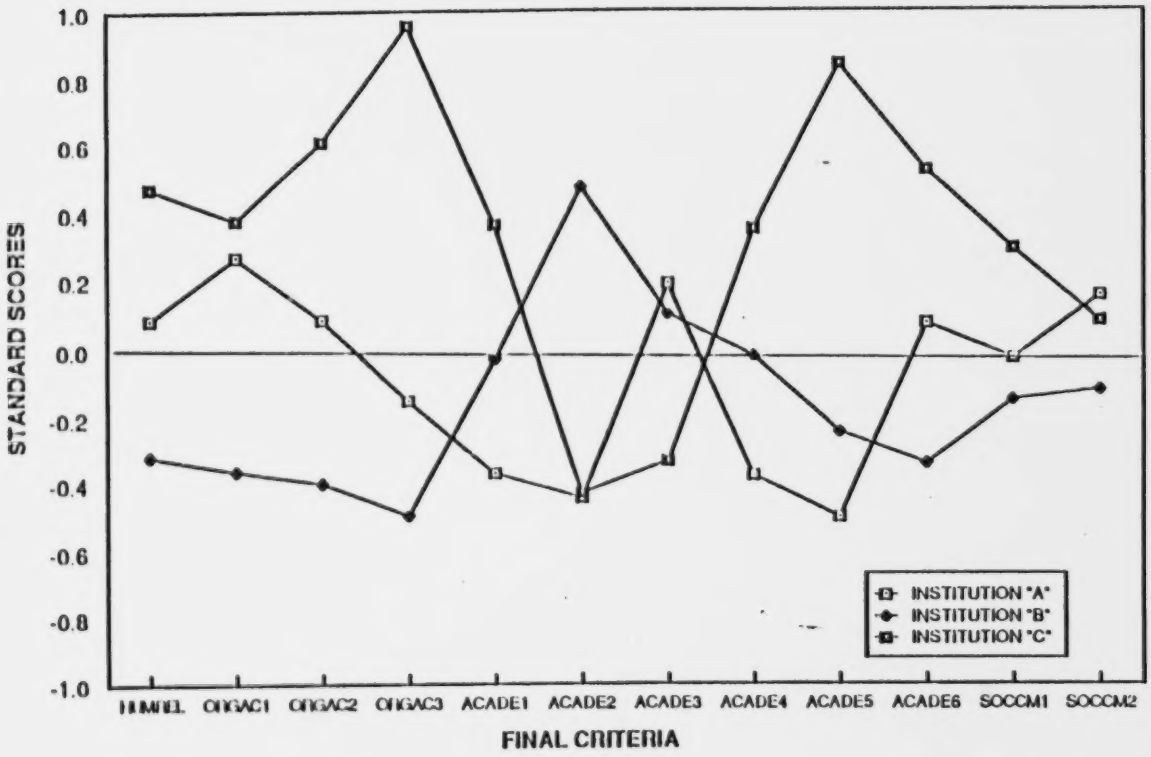
Constituency Effect on	F Statistics	Prob > F
	MULTIVARIATE ANALYSIS DF= (12, 11)	
Overall Effect	0.90	0.575
	UNIVARIATE ANALYSES DF= (1, 22)	
Human Relations	2.55	0.125
Organization Acquisition		
Advantageous Agreements	0.44	0.516
Institutional Aggressiveness	0.03	0.868
Financial Stability	0.96	0.339
Academic Goals		
Quality of Curriculum and Teaching	3.49	0.075
Quality of Graduates	0.68	0.420
Quality of Research	2.93	0.101
Quality of Continuing Education	4.46	0.046
Quality of Social Services	0.29	0.596
Quality of Cultural Activities	0.94	0.343
Social Commitment		
Altruistic Climate	0.00	0.983
National Concern	4.78	0.040

Figure 5 displays the three institutional profiles that reflect three different institutional performances. None of the institutions was rated consistently high or consistently low across the final criteria, although as was identified before, Institution "A" was rated particularly low in the "Academic Goals" domain; Institution "B" was rated particularly high in some criteria of the "Academic Goals" domain but low in the "Human Relations" and "Organizational Acquisition" domains; and Institution "C," which had an overall high rating, had its lowest one in the "Social Commitment" domain in addition to its very low rating on two of the criteria in the "Academic Goals" domain.

INSERT FIGURE 5 ABOUT HERE

Once the three institutions were compared, the extreme reported performances noted above were confirmed, except for the low rating for Institution "C" in the "Social Commitment" domain. Although this was indeed the criterion with the lowest rating at this institution, it also scored low ratings among all three institutions.

Table 8 presents the results of the Multivariate and the Univariate Analyses of Variance that were performed to analyze the similarities between the three institutions. The $F(24, 138) = 8.25$, $p < 0.0001$, was a clear indicator of the dissimilarities between the three profiles. The study revealed very significant differences in the effectiveness performances for the three



HUMREL	HUMAN RELATIONS	ACADE3	QUALITY OF RESEARCH
ORGAC1	ADVANTAGEOUS AGREEMENTS	ACADE4	QUALITY OF CONTINUING EDUCATION
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ACADE1	QUALITY OF CURRICULUM AND TEACHING	SOCCM1	ALTRUISTIC CLIMATE
ACADE2	QUALITY OF GRADUATES	SOCCM2	NATIONAL CONCERN

Figure 5. Institutional Profiles for the Three Institutions

institutions. The separate Univariate Analysis of Variance also showed significant differences ($p < 0.05$) between the three institutions in eight of the twelve final criteria: "Human Relations," "Advantageous Agreements," "Institutional Aggressiveness," "Financial Stability," "Quality of Graduates," "Quality of Social Services," "Quality of Cultural Activities," and "Quality of Continuing Education." The only two criteria with larger probabilities were those in the "Social Commitment" domain. When tested for parallelism, the $F(22, 146)=8.26$, $p < 0.00001$; consequently the parallelism between the three institutional profiles was not assumed and the test for level similarity was not run.

INSERT TABLE 8 ABOUT HERE

Data Consistency Analysis

This part reports on the findings of the consistency between the three previously described institutional profiles and a) the interview data from administrators and faculty, b) the student questionnaire data, c) the objective data, and d) the interview data from strategic constituencies. This analysis was used to determine whether other types of data corroborated the profiles of the combined administrators and faculty data; it represented the triangulation process of this study.

Table 8
Multivariate and Univariate Analyses of Variance
for Final Criteria for the Three Institutions
Institutional Comparison

Institution Effect on	F Statistics	Prob > F
MULTIVARIATE ANALYSIS DF= (24, 138)		
Overall Effect	8.25	0.0001
UNIVARIATE ANALYSES DF= (2, 84)		
Human Relations	5.04	0.009
Organization Acquisition		
Advantageous Agreements	5.12	0.008
Institutional Aggressiveness	7.83	0.0002
Financial Stability	25.53	0.0001
Academic Goals		
Quality of Curriculum and Teaching	3.00	0.056
Quality of Graduates	13.45	0.0001
Quality of Research	2.42	0.095
Quality of Continuing Education	3.14	0.049
Quality of Social Services	15.74	0.0001
Quality of Cultural Activities	6.06	0.004
Social Commitment		
Altruistic Climate	0.91	0.407
National Concern	0.51	0.602

Administrator and Faculty Interviews. The first consistency issue addressed was between the questionnaire data and the derived profiles, and the information obtained from a subsample of the same respondents through interviews. Since it did not reflect comparative ratings like the profiles, the interview information did more than being tested for relative consistency and was taken as complimentary information which helped to explain certain institutional profile peaks and certain major differences between the administrator-and faculty-derived institutional profiles.

Students. Six initial criteria entered into the comparison between the combined data (administrators and faculty) and the student data. These criteria were "Human Relations between Administrators and Students," "Human Relations between Faculty and Students," "Human Relations between Staff and Students," "Institutional Climate," "Quality of Curriculum and Teaching," and "Quality of Graduates." The only case in which students rated significantly lower than administrators and faculty was for "Quality of Graduates" in Institution "C," where $F(1,60) = 6.32$, $p < 0.01$. Students from Institutions "A" and "B" rated "Quality of Curriculum and Teaching" significantly higher than administrators and faculty ($p < 0.05$ and < 0.01 respectively). Also, students at Institution "B" rated "Institutional Commitment" significantly higher than administrators and faculty ($p < 0.01$).

Strategic Constituencies. The information gathered from the select group of strategic constituencies coincided with the institutional profiles in most cases, but exceptions existed. The strategic constituencies, as well as the institutional profile, identified Institution "A" with a low performance rating in the "Academic Goals" domain. The opinion of the strategic constituencies was consistent with the good quality of the graduates from Institution "B." However, these external observers rated Institution "B" higher than their administrators and faculty for some criteria of the "Academic Goals" domain. As the institutional profile did, the strategic constituencies rated Institution "C" highly on "Institutional Aggressiveness" and "Financial Stability."

Objective Indicators. For many of the initially listed objective indicators, institutional information was not available. The difficulties in obtaining objective data from institutions of higher education had been reported before (Cameron, 1978).

Most of the objective indicators from the "Human Relations" domain did not differentiate between the institutions; various objective indicators from the "Organizational Acquisition" domain presented a picture that was consistent with the institutional profiles. The indicators of the "Academic Goals" domain did markedly differentiate the institutions, but they did not coincide with the relative positions of the institutions in some cases (i.e. "Quality of Curriculum and Teaching"). The objective

indicators for the "Social Commitment" domain seemed to be more consistent with the institutional profiles.

In sum, the different types of data generally tended to present a consistent picture of the institutions; the additional data mostly corroborated what the institutional profiles had shown. However, there were minor detected inconsistencies, as well as some unsupported performances as depicted by the profiles.

Discussion

This study provided procedures for developing a model focusing on a specific social context and clear identification of its position regarding critical issues which define the assessment model. As a result the study will facilitate the comparability with similar studies and the further developments for other social contexts.

By developing the model of assessment, this study demonstrated the need for a critical transfer of technology to different social contexts as is the case of developing nations. It drew from the general field of organizational studies, from the field of institutional assessment in higher education, and also from the direct social context which represented the focal country. The participation of the panel of experts became an important support for guaranteeing the correct reading of the social reality.

In testing the model the results identified complex and paradoxical institutional performances. The study found that institutional effectiveness was a composite of interdependent elements as well as a contradictory concept as Dressel (1980) had noted: it found evidence of distinctive performances within each domain, except for the "Human Relations" domain, and it found evidence of related performances between the four domains. It is important to highlight that the assessment model identified some domains with less internal complexity than others (i.e., "Human Relations" and "Social Commitment").

The highly interrelated condition of the "Human Relations" domain in which nine original criteria were collapsed to a single final criterion indicated that these criteria as listed in the literature (i.e, Escotet, 1984; Krakower, 1985) are not independent separate measures of performance in this domain. The phenomenon seems to be simpler: the studied institutions have similar quality of social interactions for all the participants. While it does support the "Morale" domain identified by Cameron in 1981, it does not support Cameron's initial complexity of this domain (1978).

The moderate internal complexity found in the "Organizational Acquisition" domain was also an important finding. Two of the initial criteria, "Financial Stability" and "Advantageous Agreements" had been rarely used in previous studies; they maintained their initial independence and supported their separate identity. The rest of the criteria

which were collapsed in one single final criterion, "Institutional Aggressiveness," coincided with Cope's bidimensional analysis of effectiveness (1981).

In contrast with the similar intradomain performance for the "Human Relations" domain, the "Academic Goals" domain presented a very different picture for all six criteria. While this finding supported the variety of aspects of the academic activity suggested by Aguilar and Block (1977), by the IFI's subscales (ETS, 1978), and by Kleeman and Richardson (1985), it did not support the limited view of this domain presented by Cameron (1978, 1981), Handel (1983) and Villalobos (1984).

The reduced internal complexity of the "Social Commitment" domain in which even the two final criteria had correlations above 0.60 is also an interesting finding. Latapi (1980) suggested that there are different orientations in regard to the actions of the university to affect society; it appears that the studied institutions express their orientation in similar ways on all aspects involved in this domain.

The analysis of the relationship between domains, was essentially an analysis of the relationships of the twelve final criteria among the four domains. The high correlations found especially between "Human Relations," "Quality of Curriculum and Teaching" and "Institutional Aggressiveness" are an indication of a common pattern of effective performance across three domains. While this finding does support the "paradoxical" nature of effectiveness since it establishes that institutions perform in

similar ways in domains which represent opposite poles, it does not support the total independence of organizational domains. This common pattern of effective performance represented by three criteria: "Human Relations," "Institutional Aggressiveness," and "Quality of Curriculum and Teaching" which are similar to Cope's narrow proposition of increasing aggressiveness ("competitive advantage" and "adaptive capacity") in order to gain in internal climate and quality (1981). Cope's proposition (1981) seems to be crucial to private institutions of higher education in developing nations which have to deal with survival issues; the best way to survive may be to promote quality of the most successful programs. "Quality of Continuing Education," perceived by some as a source of income, also correlated with the three criteria listed above. Those who are not aggressive do not pay enough attention to increasing the quality of the programs. At the same time, if aggressiveness forces the quality in some programs it also benefits the internal social interactions because the idea is usually sold inside the institution by a visionary leader. It creates a solid organizational culture which improves the institutional commitment and makes people more satisfied. Committed faculty necessarily will improve the quality of the teaching process and will monitor the development of a sound curriculum. This creates a positive cycle which is beneficial for the institutions; the opposite becomes a negative cycle which deteriorates the institution.

The model demonstrated its capacity to differentiate and discriminate among institutions. This has been identified as supporting the "discriminant validity" of the operationalization of a hypothetical construct (Campbell & Fiske, 1959; Fielding & Fielding, 1986; Rigdon, 1983). The findings of the diversity and complexity of the institutional effectiveness performances had already been noted by Abdulrahim (1985), Cameron (1978, 1979), and Rigdon (1983), among others. They did not find any institution highly effective on all dimensions or domains, nor did they find similar patterns of performance between the studied institutions. Although the models for assessing effectiveness were different, the results sustained the intra-institutional complexity and the inter-institution diversity.

One aspect of the institutional performances needs special consideration; the three institutions had similarly low performances on the "Social Commitment" domain. Levy (1986) noted that an increase in the number of private universities in Latin American has a negative effect because these institutions have a tendency to withdraw from national considerations and political actions. This study gives credence to Levy's statement.

The study found differences between administrators and faculty for some criteria. Despite the reduced number of cases, the study found tendencies of dissimilar responses between the two groups of constituencies in Institution "A". The data from the interview assisted in understanding this result, since the

professors--almost all paid on a per hour basis--manifested their ignorance on institutional issues on one hand, and the administrators showed a disproportionate enthusiasm with the institutional accomplishments. Neither Cameron (1978) nor Rigdon (1983) found statistically different results when they compared different job categories within a pool of administrators, but their sample did not include faculty. Handel (1983) did report some differences between both administrators and faculty. Despite certain differences, this study determined parallelism for the profiles of administrators and faculty in the three institutions. This indicated that regardless of differences in their level of ratings, both groups at each institution had a consistent perception of the weaknesses and strengths among the criteria.

The consistency between the different types of data was similar to what others have found. Similar to Cameron (1978), this study did not draw definitive conclusions from the objective data; but used them for triangulating purposes. The objective data along with students and strategic constituencies opinions provided both explanatory and confirmatory evidence in most of the cases. The study did not pay attention to differences in the institutional performance ratings when the additional data were depicting the institution better than the profiles did. This was considered the result of a better external image, not necessarily linked to performance. The study also found evidence in the interviews with faculty and administrators that their

ratings reflected some historical comparisons which are not part of an objective information obtained on the present performance of the institution.

The overwhelming consistency of the other types of data with the institutional profiles coincided with what has been identified as indicator of "convergent validity" of a measurement (Fielding & Fielding, 1986).

Conclusions

This study accomplished its objectives by developing and testing a theoretical sound and socially relevant model for assessing higher education institutions in the Dominican Republic. Some major conclusions can be identified:

1. The society for which the model is developed as well as the type of organization should be part of the components of an assessment model.
2. It is possible to develop a socially relevant model for assessing organizational effectiveness when one takes into consideration not only the general literature, but also the literature about a specific society and the judgments of a reference group within the society.
3. The findings did not support the overall independence of criteria within various domains. For some domains the data supported a single common criterion, while for

others the complexity of the original criteria within the domain was maintained.

4. Once the final criteria of effectiveness for each domain were defined, there was evidence of interrelationships between some final criteria among the domains.
5. The institutional profiles based on the questionnaire data differentiated between the institutions. The fact that for the three institutions' administrators and faculty reported parallel profiles represents another evidence of the sound characteristics of the measurement instrument.
6. The consistency of the different types of data collected with the institutional profiles supported the validity of the measurement of effectiveness used in this model.

The model developed and tested by this study made explicit references to certain critical issues proposed in the literature for the description of effectiveness assessment models (Cameron & Whetten, 1983; Krakower, 1985). This was done for the ease of future comparisons between this model and other models. Regarding the critical issues, it determined appropriate answers for a particular type of institution in a very specific social situation (Cameron, 1986)

Also, the model met certain conditions proposed by Quinn and Rohrbaugh in 1981. It referred to a specific level of analysis (the whole organization), its framework integrated diverse theoretical perspectives in a multidomain and paradoxical

conceptualization of effectiveness, it presented a well-defined set of criteria, it provided empirical tests of the relationships among criteria, it developed an instrument to measure effectiveness, and it explicitly defined effectiveness.

Thus the resultant model is not only socially relevant, theoretically sound and organization-specific, but also comparable with other models, capable to differentiate between institutions, able to demonstrate consistency of data collected, capable of being improved, and adaptable to different social contexts. It represents a viable alternative for assessing effectiveness of institutions of higher education in developing countries.

The model developed by this study has already been used as a framework to analyze the dimensions of faculty development (Escala & Toombs, in press); has the potential to be used as a starting point of the institutional planning process; and provides a headstart for further adaptation and screening to other social contexts. While this study related to an already established tradition from which it drew, it did break new grounds from which new directions for research and application can be derived.

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APPENDIX

Criteria of Effectiveness[1]

DOMAINS	INITIAL CRITERIA	FINAL CRITERIA
Human Relations	HR among Administrators HR between Administrators and Faculty HR between Administrators and Students HR among Faculty HR between Faculty and Staff HR between Faculty and Students HR among Students HR between Students and Staff Institutional Commitment	Human Relations
Organizational Acquisition	Financial Stability	Finacial Stability
	Advantageous Agreements	Advantageous Agreements
	Flexibility to Respond Attraction of Good Students Attraction of Good Faculty Attraction of Good Administrators and Staff	Institutional Aggressiveness
Academic Goals	Quality of Graduates Quality of Curriculum and Teaching Quality of Research Quality of Continuing Education Quality of Social Services Quality of Cultural and Artistic Activities	Quality of Graduates Quality of Curriculum and Teaching Quality of Research Quality of Continuing Education Quality of Social Services Quality of Cultural and Artistic Activities

[1] The list of related indicators and the instruments (Spanish and English versions) are available upon request from: Miguel J. Escala, INTEC, Apartado 342-9, Santo Domingo, Dominican Republic.

DOMAINS	INITIAL CRITERIA	FINAL CRITERIA
Social Commitment	Correspondene with National Issues	National Concern
	Critical Conscience of Society	
	Contribution to Others	Altruistic Concern
	Students as Agents of Social Change	